

This listing of claims will replace all prior versions, and listings, of claims in the application. All amendments are made without prejudice or disclaimer.

Listing of Claims

1.(Currently Amended) [[A]] An isolated cross-reactive antibody or a fragment thereof, which specifically inhibits or blocks the mammalian Toll- like receptor 2 (TLR2)-mediated immune cell activation by specifically binding to the C- terminal portion of the extracellular domains of at least human and murine TLR2 , wherein the antibody or fragment thereof specifically binds through the its-variable regions of the heavy and light chains, wherein the heavy chain variable region comprises a complementarity determining region 1 (CDR1) comprising the amino acid sequence Gly-Phe-Thr-Phe-Thr-Thr-Tyr-Gly, a CDR2 region comprising the amino acid sequence Ile-Tyr-Pro-Arg-Asp-Gly-Ser-Thr and a CDR3 region comprising the amino acid sequence Ala-Arg-Leu-Thr-Gly-Gly-Thr-Phe-Leu-Asp-Tyr, and wherein the light chain variable region comprises a CDR1 region comprising the amino acid sequence Glu-Ser-Val-Glu-Tyr-Tyr-Gly-Thr-Ser-Leu, a CDR2 region comprising the amino acid sequence Gly-Ala-Ser and a CDR3 region comprising the amino acid sequence Gln-Gln-Ser-Arg-Lys-Leu-Pro-Trp-Thr.

2. (Currently Amended) The antibody or antibody fragment of claim 1, wherein the antibody is selected from a polyclonal antibody, a monoclonal antibody, a humanized antibody, a chimeric antibody, or a synthetic antibody.

3. (Currently Amended) The antibody or antibody fragment of claim 1 or 2, wherein the antibody specifically binds through the its-variable regions of the heavy~~[[-]]~~ chain comprising the amino acid sequence as depicted in SEQ ID NO:6 and the light chain comprising ~~carrying~~ the amino acid sequence as depicted in SEQ ID NO: ~~6 and/or 7, or a variant thereof.~~

4. (Currently Amended) The antibody of claim 1, wherein said antibody is linked to a pharmaceutical agent, ~~and/or~~ to a detectable agent, or both.

5. (Currently Amended) An isolated nucleic acid coding for the variable regions of the heavy ~~and/or chain~~ light chain of the antibody of claim ~~[[1]]~~ 3, the light chain of the antibody of claim 3, or both.

6. (Currently amended) An isolated nucleic acid which comprises the sequence of SEQ ID NO: 1 ~~and/or, SEQ ID NO: 2, or both or variants thereof, wherein the variants are selected from:~~
~~a nucleic acid having a sequence that hybridizes under moderately stringent conditions to a nucleic acid which comprises the nucleic acid sequence of SEQ ID NO:1 and/or its complement and encodes a protein region that specifically binds to the C-terminal portion of the extracellular domains of at least human and murine TLR2; and~~
~~a nucleic acid having a sequence which encodes for the amino acid of SEQ ID NO:6 and/or 7 or a variant thereof that specifically binds to the C-terminal portion of the extracellular domain of at least human and murine TLR2.~~

7. (Currently Amended) An [[The]] isolated nucleic acid ~~of claim 6,~~ which comprises at least the sequence of one or more nucleic acids selected from Nos. 172-201, 244-294 and/or, 385-417 of SEQ ID NO: 1, or of nucleic acids No. 130-174, 220-240 and/or 337-363 of SEQ ID NO : 2, ~~or a part thereof.~~

8. (Currently Amended) The isolated nucleic acid of one or more of claims 5-7, said isolated nucleic acid further comprising a nucleic acid encoding ~~specifying~~ one or more regulatory sequences operably linked thereto.

9. (Previously Presented) A vector, which comprises the nucleic acid sequence of claim 5.

10. (Currently Amended) The vector of claim 9, which is an expression vector and which further comprises ~~comprising~~ one or more regulatory sequences operably linked to said nucleic acid.

11. (Previously Presented) The vector of claim 9 or 10, which is a plasmid or a retroviral vector.

12. (Currently Amended) An isolated host cell ~~A host,~~ which has been transformed with the vector of ~~any~~ claim 9.

13. (Currently Amended) The isolated host cell of claim 12, which is a eukaryotic cell.

14. (Currently Amended) The isolated host cell of claim 13, ~~which is wherein the cell is~~
selected from the group consisting of a mammalian cell, plant cell, yeast cell or an insect cell.

15. (Currently Amended) The isolated host cell ~~mammalian cell~~ of claim 14, wherein the cell
is a mammalian cell which is selected from the group consisting of a ~~which is a~~ CHO, COS,
HeLa, 293T, HEH or BHK cell.

16. (Currently Amended) The isolated host cell of claim 12, ~~which wherein the cell~~ is a
prokaryotic cell.

17. (Currently Amended) The isolated host cell of claim 16, ~~which wherein the cell~~ is *E. coli* or
Bacillus subtilis.

18. (Currently Amended) A pharmaceutical composition comprising ~~an~~ the antibody or
fragment thereof of claim 1, a nucleic acid encoding the variable regions of the heavy and/or
light chains of said antibody or a vector comprising said nucleic acid and a pharmaceutically
acceptable carrier.

19. (Previously Presented) The pharmaceutical composition of claim 18, which further
contains one or more pharmaceutically active ingredients.

20. (Currently Amended) The pharmaceutical composition of claim 18 or 19, wherein the one or more pharmaceutically active ingredients are selected from the group consisting of antibiotic agents, antiinflammatory agents, and/or agents which block ~~blocking further a~~ pattern recognition receptor[[s]].

21. (Currently Amended) The pharmaceutical composition of claim 20, wherein the agent is ~~specific for pattern recognition receptor~~ is selected from the group consisting of Toll-like Receptor 3 (TLR3), Toll-like Receptor 4 (TLR4), Toll-like Receptor 4 (TLR5), Toll-like Receptor 7 (TLR7), Toll-like Receptor 8 (TLR8) and Toll-like Receptor 9 (TLR9)~~TLR3, TLR4, TLR5, TLR7, TLR8, and/or TLR9.~~

22. (Previously Presented) A hybridoma which produces a monoclonal antibody according to claim 2.

23. (Currently Amended) A method of preventing and/or treating a TLR2 mediated process in a mammal, comprising administering the antibody of claim 1 or a fragment thereof, a nucleic acid encoding the variable regions of the heavy chain of said antibody, ~~and/or the light chains~~ chain of said antibody, or both, or a vector comprising said nucleic acid or a composition comprising any thereof and a pharmaceutically acceptable carrier to said mammal in an effective amount to prevent and/or treat said TLR2-mediated process.

24. (Previously Presented) The method of claim 23, wherein the individual dose administered to a mammal, preferably a human, is between 1 mg to 100 mg/kg body weight.

25. (Previously Presented) The method of claim 24, wherein the individual dose is administered as a single dose to the mammal.

26. (Previously Presented) The method of claim 25, wherein the individual dose is administered repeatedly to the mammal.

27. (Previously Presented) The method of claim 24, wherein the dose is between 10 to 60 mg/kg body weight.

28. (Currently Amended) The method of claim 24 ~~[[27]]~~, wherein the dose is between 20 to 40 mg/kg body weight.

29. (Cancelled)

30. (Previously Presented) The method of claim 23, wherein the TLR2 mediated process is selected from rheumatoid or vascular arthritis, inflammatory bowel disease.

31. (Cancelled)

32. (New) The antibody or fragment thereof of claim 1 wherein the antibody comprises:

a heavy chain variable region having the amino acid sequence of SEQ ID NO:1;

a light chain variable region having the amino acid sequence of SEQ ID NO:2; or

both.

33. (New) The antibody fragment of claim 1 comprising complementarity determining regions (CDRs) of the heavy chain variable domain, wherein the CDR1 region comprises the amino acid sequence Gly-Phe-Thr-Phe-Thr-Thr-Tyr-Gly, the CDR2 region comprises the amino acid sequence Ile-Tyr-Pro-Arg-Asp-Gly-Ser-Thr and the CDR3 region comprises the amino acid sequence Ala-Arg-Leu-Thr-Gly-Gly-Thr-Phe-Leu-Asp-Tyr, and/or the complementarity determining regions (CDRs) of the light chain variable domain wherein the CDR1 region comprises the amino acid sequence Glu-Ser-Val-Glu-Tyr-Tyr-Gly-Thr-Ser-Leu, the CDR2 region comprises the amino acid sequence Gly-Ala-Ser and the CDR3 region comprises the amino acid sequence Gln-Gln-Ser-Arg-Lys-Leu-Pro-Trp-Thr.

34. (New) The antibody fragment of claim 1 wherein the antibody fragment is selected from the group consisting of an Fab, F(ab')₂ or an Fv antibody fragment.

35. (New) An antibody encoded by the isolated nucleic acid of claim 6.